



INCOMPATIBLE SUBJECTS	10 Science in Practice	DEPENDENT SUBJECTS	Core Maths
PRE-REQUISITE SUBJECTS	B in English C in Maths	POTENTIAL QCE POINTS	N/A
COURSE DURATION	FULL YEAR	CONTRIBUTES TO ATAR	N/A
FINANCIAL COMMITMENT	REFER TO FEE SCHEDULE	DELIVERY PARTNERSHIP	N/A
COURSE REQUIREMENTS	<p>This subject is a pre-requisite for Year 11 Chemistry and Physics.</p> <p>Participation in the STUDENT RESOURCE SCHEME provides students access to microscopes, Science Text (to be advised) and materials for classroom activities and photocopied class notes</p> <ul style="list-style-type: none"> • Glassware – beakers, test-tubes, stirring rods, measuring cylinders, watch glasses, burettes • Bunsen burners, tripods, test racks, metal stands and clamps, spatulas, scalpels • Electrical equipment – power packs, wiring, light boxes, probes, dissecting boards, tweezers • Chemicals – copper sulphate, calcium carbonate, marble chips, hydrochloric acid, vinegar • Metals – aluminium, copper, iron • Safety equipment – aprons and safety goggles 		
COURSE CONTENT			
UNIT 1			SUMMATIVE ASSESSMENT
Skills Measurement skills, uncertainty calculations, senior cognitive verb language Topic 1: Energy & Waves Properties of Energy and Waves, Light, Sound, Heat, Chemical, Electrical			Exam
UNIT 2			SUMMATIVE ASSESSMENT
Skills Referencing skills, researching skills, how to modify a practical for student experiment, senior cognitive verb language Topic 2: Motion Newton's 3 Laws, Linear Motion Topic 3: Gravity & Space Stars, Big Bang, Special Relativity, Quantum Theory, Planetary Motion			Student Experiment
UNIT 3			SUMMATIVE ASSESSMENT
Skills Referencing skills, researching skills, scientific writing, analyzing published scientific journals, analyzing data, senior cognitive verb language Topic 4: Periodic Table Periodic table overview, atomic structure- Bohr model, scientific notion, elemental groups & periods, trends & patterns - atomic & ionic radii Topic 5: Bonding/ Chemical Reactions Ionic/ covalent/ metallic bonds, formula writing, balancing equations (states), solubility, precipitation reactions, chemical detective			Research Investigation
UNIT 4			SUMMATIVE ASSESSMENT
Skills Analytical measurements, chemistry laboratory preparation skills, senior cognitive verb language Topic 6: Mole Concept Avogadro/ Mole, molecular mass, molar conversion, Volume/ mole, concentrations, dilutions, titrations, gases - STP, SLC, molar volume Topic 7: Stoichiometry Steps 1-4, limiting reagents, excess reagents, gas/liquid/solids, Law of Conservation of Matter, Law of Definite Proportions			Exam

CAREER PATHWAYS

A course of study in Physics and Chemistry can establish a basis for further education and employment in the fields of science, engineering, medicine and technology.

- chemist (forensic, polymer, environmental)
- physicist (medical, nuclear, astronomy, meteorology, mathematical)
- medicine/ medical research
- health / sports / nutrition consulting
- pharmaceutical and biotechnological research and development
- research scientist / technical consultants and advisors
- engineering (chemical, mechanical, civil, electrical)
- waste control / pollution regulation
- mining and petroleum industries
- product design and development
- communications and marketing industries
- defence and control quarantine industry
- conservation / resource management and assessment
- fisheries / aquaculture
- agriculture